

Reply To: 3400

Date: July 2, 1992

To: Ron Bassett, District Ranger, Ojai Ranger District
Los Padres National Forest

Subject: Insects in slash in the Pine Mountain and Reyes Peak Campgrounds
(Report No. S92-4)

Dear Ron:

This letter is to reiterate points made in our discussion last Thursday.

James Allison, FPM pathologist, Terry Austin, and I briefly visited the Pine Mountain and Reyes Peak Campgrounds on June 24. James examined the stand for dwarf mistletoe and will write a separate report on that issue. This letter concerns insect problems on the site which you may chose to treat promptly.

These two small campgrounds (total: 12 campsites) are located in a limited stand of old growth Jeffrey pine with scattered sugar pine and white fir. This is the only old growth conifer stand on the district which is accessible by vehicle. During our brief visit in the stand, no reproduction was seen and there appeared to be soil compaction around many of the trees. A few fresh pitch tubes on the bases of trees indicated the presence of the red turpentine beetle, Dendroctonus valens. This insect did not appear to be causing significant damage in the stand. No evidence of the Jeffrey pine beetle, D. jeffreyi, was seen, although this species has been collected at Big Pine (Santa Lucia Ranger District).

There was green slash on the ground which consisted of branches and tops broken by wind or snow (diameter generally less than 6 inches) and a few fallen old growth Jeffrey pines. All of the slash examined was infested with engraver beetles in the genus Ips, and the large diameter material in particular contained vigorous brood. There were numerous immature adults present under the bark. At the time I estimated these would commence emerging in a week, depending on weather.

Emerging Ips are thought to frequently attack nearby trees. When those trees are under stress from drought, soil compaction, dwarf mistletoe, or other adverse conditions, the engraver beetle attacks can result in successful colonization and death of the tree top. This in turn further reduces the vigor of the tree, increasing its susceptibility to attack by flatheaded borers which may then kill the tree. Furthermore, trees in poor condition, including large diameter old growth trees, can be killed by Ips engraver beetles.

Direct control, i.e., killing the bark beetles or removing them from the stand, is not an effective means of reducing tree mortality in a forest. However, in a stand of limited size, preventing increases in numbers of engraver beetles might help the residual stand to survive an unfavorable period. The following

Methods could be used to treat the infested material: chipping, burying, burning, wrapping the slash in heavy clear plastic or even screen to prevent escape of the emerging beetles, use of an appropriate insecticide on the slash, or removal of the slash to an area where there are no pines. Killing the brood with heat is frequently recommended, but is usually not achieved when material is placed in the sun or wrapped in plastic. Placing green, uninfested slash in the sun can result in rapid drying, making it unsuitable as bark beetle habitat. However, when the brood is well developed, as were the samples seen in these campgrounds, the adult beetles will emerge in spite of drying of the slash. Wrapping infested material in clear plastic and placing it in the sun usually does not result in temperatures high enough (120 degrees F) to kill the brood. Rather the plastic prevents the escape of the adult insects. Black plastic should not be used because bark beetles are attracted to light and will chew through the plastic where there are small holes or tears.

If the brood has emerged or been killed by natural agents, treatment of the slash is unnecessary. If a section of bark is removed, brood, if present, should be readily visible in the cambial region.

The conifers on the Pine Mountain Ridge are a limited and high value resource. Alleviating other stresses will increase their vigor. In addition to treating the dwarf mistletoe, it may be desirable to manage the soil compaction at the campgrounds through the use of barriers and perhaps by breaking up the soil. Ernie Del Rio [FTS (714) 383-5668], Forest Silviculturalist on the San Bernardino, has offered his assistance with these aspects of improving tree vigor.

If I can be of further assistance, please call me at (714) 383-5588.

Sincerely,

Laura D. Merrill

Laura D. Merrill, Entomologist
Forest Pest Management
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cc: Terry Martin Austin, Res/Rec Tech., Ojai Ranger District
Charlie Robinson, Rec. Officer, ORD
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